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PIC/JB-1018/61

Description of the Kachkanar Mill Site

The site of the Kachkanar mill is a cleared and fenced area approximately 4,500 by 1,500 feet. At the time of photography, the site was partially levelled by rough grading and six large structures and numerous small buildings were in various stages of construction. The northeastward slope of the site would allow gravity movement of heavy mineral concentrates through the mill buildings. Roadside ditches also provided drainage for the building sites. A gravel construction road and a crudely laid narrow ganger replicative the site. The Kachkanar town site, occupying a ridge west of the mill, was also under construction. The town is planned to house approximately 25,000 people whenever the first phase of the mining and concentrating operations is in full production. 3/

Three probable mill buildings were partially erected near the center of the mill site. At the north end of one building three bin-like rooms were partially roofed.

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Five silos and a large building shell with an attached tall bin-type structure were arranged along a probable future railway siding. Opposite the bin-type structure was a long, rectangular, trenched building site with a tenter row of small footings. Neither conveyors nor exhaust stacks have been constructed anywhere.

A multistory office building of reinforced concrete and three probable warehouses of banel wall-construction were being built along the west side of the mill site. In the southwest corner of the site were two long, roughly rectangular excavations for an undetermined purpose. Each excavation has an access ramp. No activity was observed in the excavations.

Two long, rectangular building sites were located east of the two excavations. The north site has three rows of footings, the south site has five rows of footings.

There are two construction materials yards, one in the northeast, the other in the southwest sections of the mill site. Each construction materials yard consists of a shop building, a motor pool, and open

2

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25X1C

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PIC/JD-1018/61

storage for equipment and building supplies. In the southwest yard is a rectangular rail-served building which is probably used for the assembly of machinery and fittings.

25X1D

None of the footings necessary for heavy equipment, such as grinding mills, electromagnetic separators, or jigging tables, were observed in the mill construction. The construction of at least three bins within a mill building seems to confirm plans for producing at least three concentrates.

According to a report on tests for the milling of iron ores at Kachkanar conducted by the Mineral Experiment Station af Sverdlovsk, the ore will be ground to a maximum size of 2 mm in diameter and passed through a series of five electromagnetic separators and a series of four jigs. 4/ Three types of concentrates will be produced: iron, titanium, and mixed concentrates.

Soviet publications indicate that low-grade titaniferous magnetite iron ore is to be mined by open pit method on Gusev and Kachkanar Mountains. Plans announced in 1958 called for an ultimate annual treatment capacity of 33 million tons of crude ore. The ore from Gusev Mountain will be transported to the Kachkanar mill by narrow-gauge railway. 3/ The ore from Kachkanar Mountain will be crushed at the open pit by two large primary (coarse) crushers and then transported to the mill site by conveyors over a route yet to be selected. 5/

The Kachkanar Region

The Kachkanar Combine is served by a branch rail line which leads north from Aziatskaya Station on the Perm-Nizhniy Tagil rail line, and by a road from Valerianovsk, 5 miles north. A trace, running 10 miles east-southeast from the mill site to the city of Nizhnyaya Tura, has

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PIC/JB-1018/61

Deen cleared through the forest. Presumably a power line from Nighnyaya Tura is to be erected in the trace, although no poles or masts were observed.

REFERENCES

PHOTOGRAPHY

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MAPS or CHARTS

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- 5 -

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PIC/JB-1018/61

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